McIntosh Fish Collection for Fall 2014

Fish collections should be performed at OU-2, and fish tissues should be analyzed for mercury (from lower, middle, and upper trophic level fish) and DDTR (from lower and middle trophic level fish) to evaluate trends over time and update site-specific bioaccumulation models. Target upper trophic level fish include largemouth bass (*Micropterus salmoides*); target middle trophic level fish include brook silversides (*Labidesthes sicculus*) and bluegill (*Lepomis macrochirus*); and target lower trophic level fish include mosquitofish (*Gambusia affinis*).

Both whole body and filet tissue analysis should be performed for largemouth bass; however, only whole body analysis is needed for the other target species. Largemouth bass should be analyzed for mercury. Mosquitofish, brook silversides, and bluegill should be analyzed for both mercury and DDTR. Fish sampling should be performed using boat electrofishing in Round Pond and four quadrants within the Basin: northeast, northwest, southeast, and southwest (Figure 1).

The following protocols should be used when collecting fish, based on predator feeding habits:

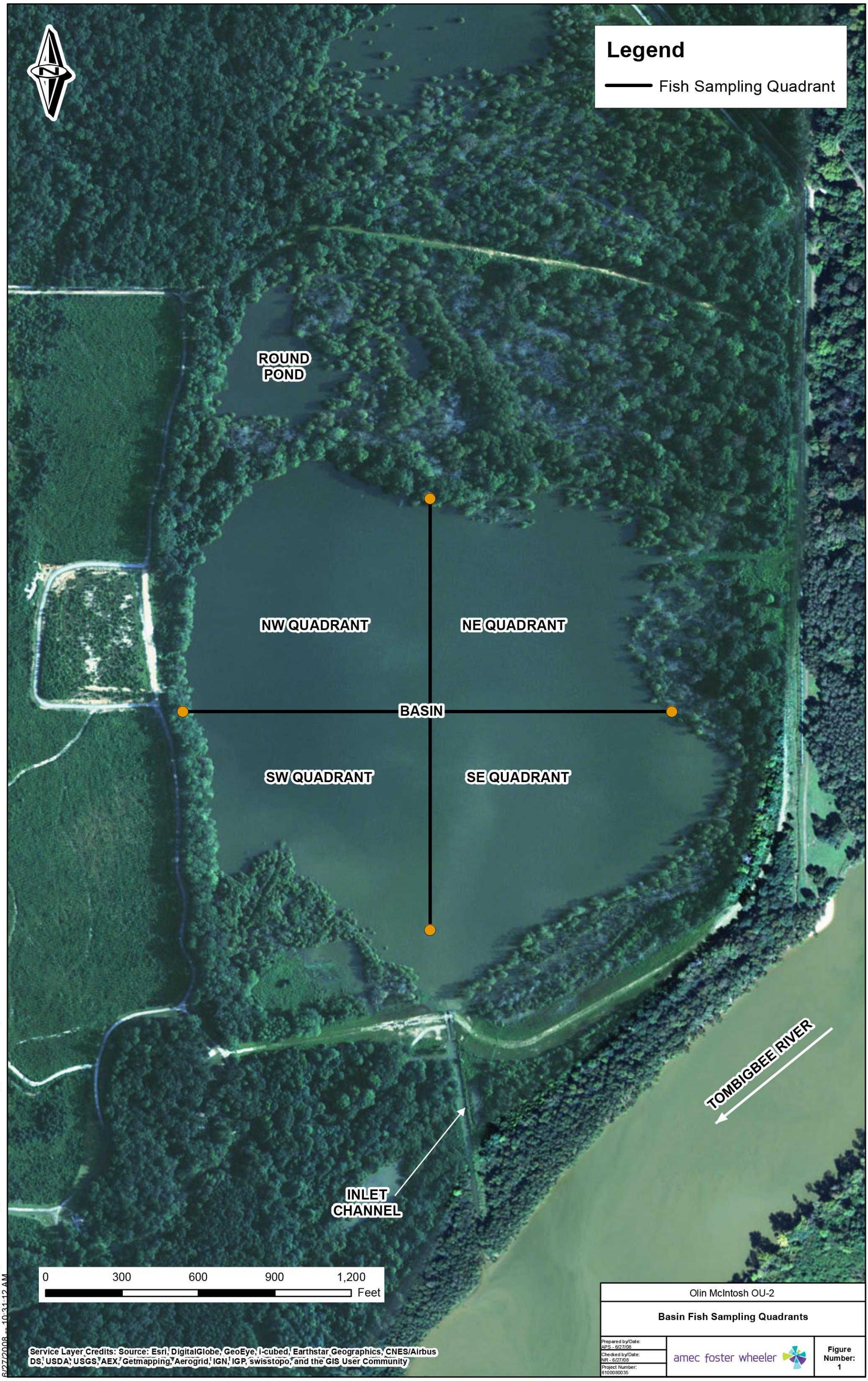
- Mosquitofish should be greater than 0.75 inches total length (TL). Ten fish should be collected per quadrant and composited for whole body analysis for mercury and DDTR.

- Silversides should be greater than 1 inch total length. Five fish should be collected per quadrant and composited for whole body analysis for mercury and DDTR.

- Bluegill whole body samples should be analyzed for mercury and DDTR (these samples are not composites):
    - One fish 2 to 3 inches TL per quadrant
    - One fish 3 to 4 inches TL per quadrant
    - One fish 4 to 5 inches TL per quadrant
    - One fish 5 to 6 inches TL per quadrant
    - One fish 6 to 8 inches TL per quadrant

- Largemouth bass:
    - Five fish between 3 and 10 inches TL per quadrant. Whole body analyses for mercury should be conducted on these fish. These fish should be analyzed individually.
    - Five fish between 10 and 19 inches TL per quadrant. Filet analyses for mercury should be conducted on these fish. These fish should be analyzed individually.

Lengths and weights should be recorded for each fish collected.



Olin McIntosh OU-2

Basin Fish Sampling Quadrants

Prepared by/Date: APS - 6/27/08	amec foster wheeler	Figure Number: 1
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